



37525

PATENT TRADEMARK OFFICE

Invention Disclosure

Inventor : David John Daigler
Address : 1757 State Highway 162, Sprakers, NY 12166
Title of Invention : Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys

1. I thought of this Mobil Telescopic Antenna Mount while I was cleaning my pool with a telescopic vacuum handle on 08/06/2002. I had been trying to think of a more efficient way to temporarily locate antennas up in the ceiling area of a building during a Wireless Networking Site Survey. A "site survey" is the process of determining the proper antenna locations for a wireless network. I had been involved with such a survey during that day and was frustrated by the need to move large ladders around the site in order to temporarily mount the antennas in the ceiling. When I extended the telescopic handle on the pool vacuum, this idea came to me.
2. The purpose of this invention would be to provide temporary power and a temporary elevated location to a Wireless Networking Access Point and Antenna(s). The advantage of my invention would be that a single person could perform a Wireless Networking Site Survey without the need for ladders or a hydraulic lift. The will substantially reduce the cost and time to perform such a site survey.

Inventor: David John Daigler Date 8/15/02

I agree not to disclose the above confidential information. Witnessed and Understood:

Matthew J. Gress Date 8/15/02

Donald J. Liberty Date 8/15/02

Title of Invention : Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys

Continued ...

3. My Mobil Telescopic Antenna Mount consists of a platform with locking wheels, brackets to mount 2 un-interruptable power supplies (UPS) to the platform, an antenna mast base attached to the platform, a telescopic pole that inserts into the mast base, a universal cross member at the top of the telescopic pole for mounting various types of antennas and a universal mounting plate for attaching different models of wireless networking access points to the cross member.
4. Pictures attached.
5. The way to operate the device is to attach your wireless network access point of choice to the mounting plate and your antenna(s) of choice to the cross member, attach the cross member to the top of the telescopic antenna mast, insert the telescopic antenna mast into the mast base, transport the unit to the desired location, lock the wheels, plug the power cord from the wireless network access point into the UPS, extend the telescopic antenna mast to the desired height, lock the telescopic antenna mast at the desired height, attach the safety cable to a nearby anchor, perform wireless network site survey as usual and move the antenna as desired to properly designate the required antenna location.

Inventor: *Dee Dani* Date 8/16/02

I agree not to disclose the above confidential information. Witnessed and Understood:

Michael J. Gless Date 8/16/02

Doreen J. Wheat Date 8/16/02

Title of Invention : Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys


Continued ...

6. I believe that the process of performing a Wireless Network Site Survey with 1 person and without the need for a person to become elevated to temporarily install an antenna is a totally new concept. This will substantially reduce the cost of such site surveys to businesses and will open the market to many new vendors.
7. The closest invention I have found to mine is that of a "Wireless communications methods and systems using a remote, self-contained communications antenna unit", #20020025836 by Clifford Lee Knight on February 28, 2002. The differences are that my invention will be used indoors instead of outdoors, my invention will cost hundreds of dollars instead of tens of thousands of dollars, my invention will be used as a diagnostic tool instead of a production unit, my invention can be taken apart and will fit into a passenger vehicle.

Inventor:  Date 8/16/02

I agree not to disclose the above confidential information. Witnessed and Understood:

 Date 8/16/02

 Date 8/16/02



37525

PATENT TRADEMARK OFFICE

Invention Disclosure – Building and Testing

Inventor : David John Daigler
Address : 1757 State Highway 162, Sprakers, NY 12166
Title of Invention : **Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys**

Reference : Conception recorded on 8/16/2002, Signed by
David John Daigler, Witnessed by Michael J. Glass and
Donald J. Wheatley

1. A working model of this Mobile Telescopic Antenna Mount was built by me during the period of 8/6/2002 and 8/17/2002 at my home.
2. Attached are several pictures of the model, a parts listing with prices and sources and copies of all my receipts.
3. During construction, the following design changes were made from the original conception in order to provide more practicality and functionality to the invention.
 - Handles were added to the platform so that it could be easily carried.
 - The brackets for the two un-interruptible power supplies (UPS) were changed to rubber tarp straps and eye bolts so the UPS's could be detached during transport, so that various UPS sizes could be accommodated and so that the straps could be used to hold the components to the platform during transport.

Inventor: David John Daigler Date 8/20/02

I agree not to disclose the above confidential information. Witnessed and Understood:

Michael J. Glass Date 8/21/02

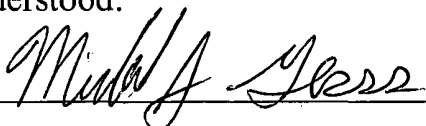
Title of Invention : **Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys**

Continued ...

3. During construction, the following design changes were made from the original conception in order to provide more practicality and functionality to the invention. *Continued ...*
- The antenna mast base was replaced by a threaded floor flange and a threaded pipe so that the mast base (pipe) could be detached from the platform during transport. Threaded PVC caps were added to the ends of the threaded pipe. At one end the cap protects the threads during transport. At the other end, the cap was drilled out and used as a reducer between the threaded pipe and the telescopic pole that acts as the antenna mast.
 - The universal cross member was developed in 2 sections so that it could be reduced in size during transport.
 - Mini bungee cords were added to the universal mounting plate so that an access point (AP) could be secured to the plate without the use of screws or hardware.
 - A safety cable and clamp were added to the telescopic pole so that the invention could be secured to a stationary object during its use.
 - Hitch pins were added to the couplings of the universal cross member for added safety and stability. The hitch pins were chained to the unit to insure that they were available during assembly.

Inventor:  Date 8/20/02

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 Date 8/21/02

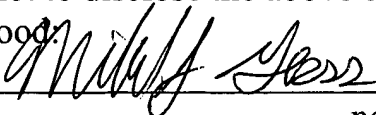
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Continued ...

4. My invention was tested on 08/20/2002 at the Price Chopper Supermarket on Glen St. in Glens Falls, NY. by myself and Michael J. Glass. I transported the invention to the site in my personal passenger vehicle in its disassembled state. I attached two American Power Conversion UPS's to the invention using the rubber tarp straps as designed. I screwed the threaded pipe into the flange as designed. I connected the two sections of the universal cross member together and inserted the hitch pin to lock them. I attached a Cisco Aironet 350 series access point to the unit using the mini bungee cords as designed. I attached two Antenex FG24003 antennas to the universal cross member by inserting them into the end of the 1 inch PVC tee as designed. I attached the AP to the antennas via the cables provided with the antennas. I plugged a category 5E network cable into the AP. We transported the invention into the building. The universal cross member was attached to the top of the telescopic pole and the hitch pin was inserted to lock the pieces together. The bottom of the telescopic pole was inserted into the top of the threaded pipe that was attached to the platform. The invention in its fully assembled state was taken to a location in the store where the telescopic pole was extended vertically. The safety cable was attached to a shelving fixture via the clamp. The power supply for the AP was plugged into the UPS and the UPS was turned on. The wireless networking site survey proceeded as normal by walking around the building and measuring the signal from the antennas on the invention via a laptop computer equipped with a wireless networking interface card. After the first antenna location was verified, the unit was moved to another location after the safety cable was detached from the shelving fixture and the telescopic pole was lowered from its elevated position. After a second antenna location was verified, the invention was disassembled and transported from the site in my personal passenger vehicle.

Inventor:  Date 8/20/02

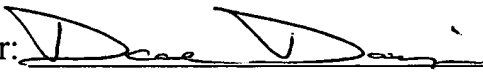
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 Date 8/21/02

Title of Invention : **Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys**

Continued ...

5. The results of the test were exactly as expected. The unit was very easy to transport, assemble and use. The invention was used to provide actual locations for the future installation of wireless network access points.
6. Pictures of the unit during the testing are attached.
7. I have decided to call my invention "THE APE". It stands for "Access Point Elevator". My slogan may be, "Stop MONKEYING around with bulky ladders and expensive lifts and get "THE APE". "You don't have to be an APE to use "THE APE". In other words, my invention is a simple and relatively light tool that can be used by any one single person, including small women, to perform wireless networking site surveys instead of the existing method of using heavy machinery or heavy, bulky ladders to perform the surveys.

Inventor:  Date 8/20/02

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Title of Invention : **Mobil Telescopic Antenna Mount for
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Continued ...

8. In addition to the patent application #20020025836 by Clifford Lee Knight mentioned in my invention disclosure of 08/16/02, I have found the following patents that may be relevant.
- US Pat. # 5,850713 by Yukinori Hojo on 12/22/98. This patent is for a "Device raising and lowering apparatus". Although this patent is for a device to raise and lower devices "such as antennas", the patent is centered around the design of a hydraulic mast without specific purpose. My invention is for a system that has specific purpose that includes a manually operated mast as a component.
 - US Pat. # 5,531,419 by Karl M. Gustafsson on 07/02/98. This patent is for a "Mast base, especially for a temporarily erected mast". Again, this patent centers around the design of the mast and not its specific purpose. Also, the design of this mast keeps it from being mobile once it is erected. My invention maintains mobility even after the mast is extended.
 - US Pat. # 5,787,111 by William E. Gilmore on 07/28/98. This patent is for a "Transportable communication system". Although this patent is about a device that may have similar components to my invention, it really centers around an outside, production type device for cellular communications as does the Clifford Lee Knight patent application. My invention is used indoors as a testing tool.

Inventor:  Date 8/20/02

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**Title of Invention : Mobil Telescopic Antenna Mount for
Wireless Networking Site Surveys**

Continued ...

9. Parts listing with source, price and description

Purch Date Source	QTY	\$ Cost w/ Tax	Description	Part #
8/6/02 School House Pools	1	32.05	16 foot telescopic pole	1
8/11/02 Home Depot	1	6.37	Handi Clamp	2
8/14/02 Home Depot	1	0.42	1 inch PVC bushing	3
8/14/02 Home Depot	2	1.05	1 inch PVC tee	4
8/14/02 Home Depot	1	1.62	1 inch PVC cross	5
8/14/02 Home Depot	1	0.99	1 1/4 inch PVC threaded cap	6
8/14/02 Home Depot	4	23.61	2 1/2 inch locking caster	7
8/14/02 Home Depot	1	3.17	1 inch by 1 inch angle aluminum	8
8/14/02 Home Depot	1	2.41	10 foot by 1 inch sched 40 PVC pipe	9
8/14/02 Home Depot	2	8.59	2 foot by 2 foot 3/4 BC plywood	10
8/14/02 Home Depot	1	10.70	30 inch by 1 1/4 inch galvanized threaded pipe	11
8/14/02 Home Depot	20	2.58	5/16 inch threaded bolt	12
8/14/02 Home Depot	20	2.58	5/16 inch threaded nut	13
8/14/02 Home Depot	20	0.65	5/16 inch lock washer	14
8/14/02 Home Depot	20	0.65	5/16 inch washer	15
8/15/02 Home Depot	1	3.19	6 1/2 inch door pull	16
8/15/02 Home Depot	8	16.77	1/4 inch eye bolt with nut	17,18
8/15/02 Home Depot	18	0.58	1/4 inch washer	19
8/15/02 Home Depot	8	0.26	1/4 inch lock washer	20
8/15/02 Randy Auto Parts	4	7.96	rubber tarp strap	21
8/15/02 Security Supply	1	3.04	1 1/4 inch floor flange	22
8/16/02 Bellevue Builders	1	2.78	6 1/2 inch door pull	16
8/16/02 Bellevue Builders	2	6.34	1/4 inch by 2 inch hitch pin	23
8/17/02 Home Depot	1	0.99	1 1/4 inch threaded PVC cap	24
8/17/02 Home Depot	2	0.53	10 inch mini-bungee cord	25
8/17/02 Home Depot	1	0.74	tie plate	26
8/17/02 Home Depot	1	0.83	24 inch jack chain	27
8/17/02 Dave Daigler	2	1.00	3/16 inch cable clamp	28
8/17/02 Dave Daigler	1	0.50	3/32 inch plastic coated cable by 24 inches	29
8/17/02 Dave Daigler	11	1.00	1 inch self tapping sheet metal screw	30

Inventor: _____

Date 8/20/02

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Date 8/21/02

**THE HOME DEPOT 1239
SCHENECTADY, NY 12304 (518)388-9121
STORE MANAGER LENNY GABOUREL**

1239 00011 74572 08/15/02
11 364 12:53 PM
SALE

1239 00002 10641	08/14/02
61 332	12:48 PM
SALE	



⑤



②

Invention Disclosure

Inventor : **1-877-WIRE-4HILL**
Address : **4572 08/15/02**
Title of Invention : **Mobile Telescopic Antenna Mount for Wireless Networking Site Surveys**

RECEIPT REQUIRED FOR REFUND
LEADERSHIP OPPORTUNITY, HOMEDEPOT.COM/
SLIP. 1-877-WOOL-4HD



~~1259~~ 11 74572 08/15/02 6658

[illegible]

XXXXXXXXXXXX9724
AUTH CODE 014210/6021794



1239 02 10641 08/14/02 4746

RECEIPT REQUIRED FOR REFUND

039923133106	BUSHING	0.39
039923137500	3/4CPLSXSS	0.17
039923145383	TEE	0.49
039923145383	TEE	0.49
039923139320	1IN CROSS	1.51
039923137227	1 1/4"THRCA	0.92
039003095102	2 1/2"ICSTB	5.49
039003095102	2 1/2"ICSTB	5.49
039003095102	2 1/2"ICSTB	5.49
030699419500	ANGLE GAUG	2.95
754826200501	1X10 P/C	2.24
718793150146	2X2 3/4 BC	3.99
718793150146	2X2 3/4 BC	3.99
191361 1-1/4X1 GA		9.95
2.500 @ \$3.98		
030699901104	NUT/BOLTS	2.40
20.000 @ \$0.12		
030699901012	NUTS/BOLTS	0.40
20.000 @ \$0.02		
030699901012	NUTS/BOLTS	0.02
ITEM CORRECTION		
030699901012	NUTS/BOLTS	-0.02
ITEM CORRECTION		
030699901012	NUTS/BOLTS	-0.40
030699901104	NUT/BOLTS	2.40
20.000 @ \$0.12		
ITEM CORRECTION		
030699901104	NUT/BOLTS	-2.40
030699901111	NUTS/BOLTS	2.40
20.000 @ \$0.12		
030699901029	NUTS/BOLTS	0.60
20.000 @ \$0.03		
030699901029	NUTS/BOLTS	0.60
20.000 @ \$0.03		
SUBTOTAL		55.05
TAX NV 7.500		4.13
TOTAL		\$59.18
DISCOVER		59.18

038548592008 HANDICLAMP
TAX NY 7.000
TOTAL 5.96
CASH
CHANGE DUE



Inventor:

THE HOME DEPOT 1289
135 HANNA-FORD PLAZA
AMSTERDAM, NY 12010 (518)843-1275

1289	00002	30672	08/11/
61	261		02:19

SALE

BUILT IN COPY CUSTOMER-TOP COPY MERCHANT

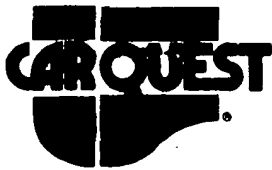
I AGREE TO PAY ABOVE TOTAL AMOUNT
ACCORDING TO CARD ISSUER AGREEMENT

RECORD NUMBER: 001
ACCOUNT: 6011300020599724 01/05
CARD TYPE: DISCOVER
TRAN TYPE: SALE
AUTH CODE: 006858
AMOUNT: 32.

MERCHANT ID: 633000830626700
DATE: 08/06/02 9:23:26 AM

SCHOOL HOUSE POOLS INC.
4500 STATE HWY 30
AMSTERDAM, NY 12010
518-843-2820

Date



YOU'LL FIND IT AT CARQUEST™

RANDY'S AUTO PARTS
1225 CURRY RD
SCHENECTADY, NY 12306
PHONE - (518) 355-3120

(5)

AUTO PARTS

Invention Disclosure Building and Testing

WARRANTY: This product is warranted to be free from defects in material and workmanship under normal use and service for the period of time specified on this receipt. The seller neither assumes nor authorizes any other person to assume for it any liability in connection with the sale of all items.

ANY PART RETURNED FOR CREDIT MUST BE ACCOMPANIED BY THIS RECEIPT.

SEE CARQUEST STORE FOR DETAILS OF THIS COAST TO COAST GUARANTEE.

BILL TO	CUSTOMER	David John Daigler	SHIP TO	CASH CUSTOMER	1 OF 1
Address:	1757 State Highway 162, Sprakers, NY 12166				

INVOICE NO.	CUSTOMER NO.	DATE	CUST. P.O. NO.	SALES	CNTR	SHIP VIA	TERMS
0200158	10	08/15/02					3/21
MFG. PART NUMBER	CROCKED	SHIPPED	3KO	LIST PRICE	NET	NET CORE	EXT. AMOUNT
1 CPR 771005 BPC MULTI TARE STRAP				25.886	18.490		18.49 T
2							
3							
4							
5							

CARQUEST

COAST TO COAST

GUARANTEE

19.88/10 = 1.99/ea.

FREIGHT	LABOR	SHOP	TOTAL CORE	TAXABLE AMT.	SALES TAX	SUB TOTAL
0.00	0.00	0.00	0.00	18.49	1.39	19.88
01:30 PM	RECEIVED BY X	20.00/	0.12	LIST TOTAL	25.89	PAY THIS AMOUNT

Security Supply - Schenectady
1721 State Street
SCHENECTADY NY 12304
518-393-2171 Fax 518-393-2192

** SHIP TICKET **
Order #: S1164590.002
P/O # : DAIGLER
Printed: 13:11:40 15 AUG 2002
Page # : 1 of 1

(6)

Old To:
SCHENECTADY C/S A
20% REHANDLING CHARGE ON
RETURNED MERCHANDISE
SCHENECTADY, NY 12304
* C.O.D. ** C.O.D. ** C.O.D. **

Ship To:
SCHENECTADY C/S A
20% REHANDLING CHARGE ON
RETURNED MERCHANDISE
SCHENECTADY, NY 12304

Ordered by	Order Date	Ship Date	Ship Via	Warehouse
	08/15/02	08/15/02	PK PICK UP	Shp 3 Prc 3
Writer	Salesperson	Release #	Freight Allow d	
Tom Nachbar	STORE ACCOUNT		No	
Ordered Shipped	Product Description	Net Prc	Ext Prc	
1ea 1ea	BMFFJ	2.834	2.83	
Inventor:	BLACK MAL FLOOR FLANGE 1 1/4	Date		
	Lot 38702	8/20/02		

SUBTOTAL
SALES TAX

2.83
0.21

